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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|------------------------------|------------------|
| 10/750,453 | 12/31/2003 | J. Nelson Wright | 341148023US | 4976 |
| 25096 | 7590 | 07/13/2005 | EXAMINER SWARTHOUT, BRENT | |
| PERKINS COIE LLP PATENT-SEA P.O. BOX 1247 SEATTLE, WA 98111-1247 | | | ART UNIT 2636 | PAPER NUMBER |
| DATE MAILED: 07/13/2005 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/750,453

Applicant(s)

WRIGHT ET AL.

Examiner

Brent A. Swarthout

Art Unit

2636

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

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1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

a. Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dimmer.

Dimmer discloses a system for locating a marker associated with a patient (page 3, paragraph No. 30) comprising excitation source 18 for emitting pulses to activate markers 14, a sensing array 16 (paragraph No. 32), and receiving means 28 for analyzing the input data to provide a high signal to noise ratio (paragraph No. 23), and providing exciting pulses in a non-periodic manner (paragraph No. 39).

Choosing to remove noise from inputs instead of taking measures to reduce noise to obtain a high signal to noise ratio would have been obvious to one of ordinary skill in the art, since noise filtering is a well-known art technique for noise reduction, which would have been functionally equivalent to the noise reduction technique used by Dimmer.

Regarding claim 2, the increasing/decreasing current ramp of exciting pulses used by Dimmer (paragraph No. 39) would have been equivalent to introduction of a pseudo-random dither into the exciting pulses.

Regarding claim 3, choosing a particular dither would have been obvious depending on what was found to be most effective through routine experimentation.

Regarding claim 4, Dimmer teaches that signals are received over a given time period (paragraph No. 32).

Regarding claims 10-11, Dimmer teaches random exciting pulse polarity that varies with time (paragraph No. 36).

2. Claims 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dimmer in view of Fabian (095).

Dimmer discloses a marker location system as set forth above except for specifically stating that pulse phase is variable.

Fabian teaches desirability in a marker location system of varying pulse phase (abstract).

It would have been obvious to use a variable pulse phase as suggested by Fabian in conjunction with a marker detection system as set forth by Dimmer in order to optimize coupling between the excitation means and marker means.

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Schulman, Neff, Linberg, Boos, Fabian (537), Mate and Fabian (394) disclose marker detection systems.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brent A

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Swarthout whose telephone number is 571-272-2979. The examiner can normally be reached on M-F from 6:30 to 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeff Hofsass, can be reached on 571-272-2981. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Brent A Swarthout
Art Unit 2636

BRENT A. SWARTHOUT
PRIMARY EXAMINER